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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,696	09/16/2003	Timothy Wakeley	10002635-2	4712

7590 08/24/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
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EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,696

Applicant(s)

WAKELEY ET AL.

Examiner

Kim T. Huynh

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. This application discloses and claims only subject matter disclosed in prior Application No. 09687052, filed 10/12/00, and names an inventor or inventors named in the prior application. Accordingly, this application may constitute a continuation or division. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11, 13-23, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 6,070,207) in view of Papa et al. (6,324,608)

As per claim 1, Bell discloses method for allowing a device to be removably attached to a computer system while maintaining the system integrity, comprising the steps of: configuring a bridge(fig. 1, 100) between the device and the computer system; (col.3, lines 32-35) wherein

- while in an attached state if recognizing that the device has been removed from the bridge, then the bridge transitioning into a

cleanup state, then a removed state; (col.2, lines 41-51), (col.11, lines 19-25)

- while in the cleanup state, performing the ordered steps of the bridge sending a first signal to the computer system; in response to the first signal, the computer system sending a second signal to the bridge; and in response to the second signal, the bridge sending a third signal to the computer system to indicate that the bridge has been removed from the computer system; (col.2, lines 41-67), wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)
- the attached state indicating that the device has been attached to the computer system; and (col.2, lines 60-67)
- the removed state indicating that the device has been removed from the computer system. (col.2, lines 41-67), wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)

Bell discloses all the limitations as above except removing the device from the bridge is performed without giving prior notice to the bridge, nor the computer system. However, Papa discloses bridge acts as a terminator so that the removal and replacement of a network interface module from its shelf through an electrical removal and insertion is not an electrical disruption of bridge. (col.7, lines 46-50, wherein the bridge is performing the termination of the

removal, it is inherent that the bridges is not being notified as the removal of the devices)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Papa's teaching into Bell's method so as to also allow for the removal and replacement without powering down the network server.

As per claims 2, 14, Bell discloses wherein the bridge using a first protocol to communicate with the computer system, and using a second protocol to communicate with the device. (col.6, lines 42-61), (col.7, lines 8-12)

As per claims 3, 15, Bell discloses wherein the first protocol or the second protocol is: (col.7, lines 8-13)

- a protocol complying with the SCSI standard;
- a protocol complying with the IDE standard; a protocol complying with the fibre channel standard;
- a protocol complying with the IEEE 1394 standard; or
- a protocol complying with the USB standard.

As per claims 4, 16, Bell discloses wherein the bridge includes a processing unit and memory to convert commands of the first protocol and the second protocol. (col.6, lines 42-61), (col.8, lines 37-50)

As per claims 5, 17, Bell discloses wherein the first protocol is the same as the second protocol. (col.6, lines 42-61), (col.8, lines 37-50)

As per claims 6,18, Bell discloses while in the cleanup state, if the bridge receives a processing command, then the bridge sends a fourth signal to

the computer system indicating that the bridge cannot process the command. (col.9, lines 10-21)

As per claims 7, 19, Bell discloses while in the cleanup state, the bridge further sends a fifth signal to the computer system indicating that the command has been terminated. (col.9, lines 10-21)

As per claims 8, 20, Bell discloses wherein, while in the cleanup state, the computer system, upon receiving the fourth or the fifth signal from the bridge, provides a sixth signal to indicate that the command cannot be processed. (col.9, lines 10-21)

As per claims 9, 21, Bell discloses the method further comprising the step of providing a buffer between the device and the bridge for protecting the bridge from disruption signals from the device. (col.10, lines 31-65), (col.2, lines 32-67)

As per claims 10, 22, Bell discloses the method further comprising the step of providing a buffer between the device and the bridge wherein the buffer prevents the signals passing from the device to the bridge. (col.10, lines 31-65)

As per claims 11,23, Bell discloses wherein the bridge transitioning to the cleanup state upon recognizing that the bridge cannot communicate with the device via the buffer. (col.10, lines 1-30)

As per claim 13, Bell discloses the system for allowing a device to be removably attached to a computer system while maintaining the system

integrity, comprising: a bridge (fig.1, 100) interfacing between the device and the computer system; wherein (col.3, lines 32-35)

- while in an attached state if recognizing that the device has been removed from the bridge, then the bridge transitioning into a cleanup state, then a removed state; (col.2, lines 41-67), (col.11, lines 19-25)
- while in the cleanup state the bridge sending a first signal to the computer system; in response to the first signal, the computer system sending a second signal to the bridge; and in response to the second signal, the bridge sending a third signal to the computer system to indicate that the bridge has been removed from the computer system; (col.2, lines 41-67) wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)
- the attached state indicating that the device has been attached to the computer system; and (col.2, lines 41-67)
- the removed state indicating that the device has been removed from the computer system. (col.2, lines 41-67) wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)

Bell discloses all the limitations as above except removing the device from the bridge is performed without giving prior notice to the bridge, nor the computer system. However, Papa discloses

bridge acts as a terminator so that the removal and replacement of a network interface module from its shelf through an electrical removal and insertion is not an electrical disruption of bridge. (col.7, lines 46-50, wherein the bridge is performing the termination of the removal, it is inherent that the bridges is not being notified as the removal of the devices)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Papa's teaching into Bell's method so as to also allow for the removal and replacement without powering down the network server.

As per claim 25, Bell discloses a method for hot removing a device from a system, comprising the steps of:

- configuring a bridge (fig.1, 100) between the device and the system; and (col.3, lines 32-35)
- configuring a buffer between the device and the bridge for protecting the bridge from signals from the device; wherein (col.2, lines 32-67)
- while in an attached state if recognizing that the device has been removed from the bridge, then the bridge transitioning into a cleanup state, then a removed state; (col.2, lines 41-67) wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)

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- while in the cleanup state, the bridge sending a first signal to the system; in response to the first signal, the system sending a second signal to the bridge; and in response to the second signal, the bridge sending a third signal to the system to indicate that the bridge has been removed from the system. (col.2, lines 41-67)
wherein the steps of confirming a communications connection, it is inherently that confirming a communications disconnection as well)

4. Claims 12 , 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent 6,070,207) in view of Papa et al. (6,324,608), and further in view of Mott et al. (US Patent 6,574,695)

As per claim 12, Bell discloses all the limitations as above except wherein the bridge recognizes that the device has been removed from the bridge based on a signal asserted at a control pin of the bridge; and the signal changes when the control pin of the bridge is engaged to or disengaged from a control pin of the device. However, Mott discloses all of the hot swap levels require staged connector pins, Each pin has one of the three lengths: long; medium; or short. The long pins are used for power and ground connections and medium pins are bus signals and short pin indicates the board is inserted. (col.4, lines 50-65)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Mott's teaching into Bell's method so as to provide an easy and inexpensive mechanism for enabling hot swapping while allowing existing devices and device drivers to be used. (col.2, lines 3-5)

Response to Argument

5. Applicant's continuation application filed on 9/6/03 have been fully considered but are not place an application in condition for allowance.

a. In response to applicant's argument that Bell, Papa, and Mott, alone or in combination does not discloses "if recognizing that the device has been removed from the bridge, then the bridge transitioning into a cleanup state, then the removed state." As Bell notes at (col.2, lines 41-67), notifying the computer system which bus system will be unplugged, in response to the notification, the computer places system non-operational state, furthermore, at col.11, lines 19-25, Bell discloses the computer system provides an indication to the user that the bus system can unplugged or disconnected from the system.

b. In response to applicant's argument that Bell does not disclose or teach "while in the cleanup state, the bridge and the computer system issue signals." As Bell notes at (col.11, lines 19-25), the computer system provides an indication to the user that the bus system can be unplugged or disconnected from the system.

Thus, the prior art teaches the invention as claimed and the claims do not distinguish over the prior art as applied.

Conclusion

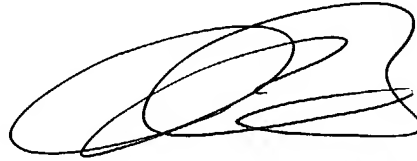
6. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM-6:30PM.*

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh

August 22, 2004



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
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